Remarks

Claims 1 and 3–49 are pending. Applicants have withdrawn claims 13–31, 34–38 and 40–47 from further consideration. Applicants hereby amend claim 1 and cancel claims 48 and 49. Applicants respectfully request reconsideration and allowance of claims 1, 3–12, 32–33 and 39 in view of the amendments above and the following comments. Applicants respectfully submit that the amendments are fairly based on the specification and respectfully request their entry.

35 U.S.C. § 101 REJECTION OF CLAIMS 1, 3-12, 32, 33 and 39

Claims 1, 3-12, 32, 33 and 39 are again rejected under 35 USC § 101 for, in the Examiner's view, lacking utility. More specifically, the Examiner maintains that the claimed invention is not supported by a specific or substantial utility. Applicants respectfully traverse this rejection for the reasons set forth below.

In the instant application, the claimed subject matter comprises nucleic acid sequences encoding a human LCP protein. The claimed LCP gene sequences encode trans-membrane polypeptides, with an N-terminal signal peptide (page 7, ll. 5 – 8). These polypeptides also contain an LCCL domain, mutations within which have been shown to cause the deafness disorder DFN9 in humans (page 6, ll. 19 – 23). Also included in the

polypeptides encoded by the gene sequence of the instant application is a discoidin domain, with a predicted amphipathic, membrane binding alpha helical structure at the C-terminal (page 6, line 24 through page 7, line 4). The polypeptides encoded by the claimed gene sequences also contain a truncated CUB domain, an extracellular domain found in mostly developmentally regulated proteins (page 6, ll. 12 – 18).

Applicants disclosed in the specification that the gene and encoded polypeptides of the instant invention are useful in developing therapeutics as well as diagnostics for neurological and developmental disorders and tumors (page 5 line 30 through page 6, line 2; page 7, ll. 2 – 4).

It was well established, before the instant application was filed, that one can use a gene sequence in disease diagnosis, prognosis and in the development of therapeutics and treatment. Also well know is the technique for prenatal diagnosis by mutation analysis of disease-causing genes. The nucleotide sequences of these genes can be used as a reference to compare to gene sequences from patients or healthy individuals for mutation analysis, diagnosis and prognosis. The gene sequences can be used as substrates on microarrays for expression analysis in cancer patients or patients with developmental disorders. The sequences can also be used as antisense inhibitors of the over-expressed genes in patients. The sequences can be used to produce proteins, antibodies or fusion proteins useful for the diagnosis and development of therapeutics as well. In addition, the

nucleic acid sequences can be used to develop primers and probes, the primers can be used in PCR amplification of fragments of the gene, while the probes can be used for genomic as well as expression analysis. Applicants respectfully submit that the claimed invention is useful and request that the above rejection be withdrawn.

35 U.S.C. § 112, FIRST PARAGRAPH REJECTION OF CLAIMS 1, 3-12, 32, 33 and 39

Claims 1, 3–12, 32, 33 and 39 stand rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement. According to the Examiner, since the claimed invention is not supported by either a convincing asserted utility or a well-established utility, one skilled in the art clearly wound not know how to use the claimed invention.

Applicants respectfully traverse the rejection. Applicants respectfully submit that because the claims indeed display a patentable utility for the reasons advanced above, the derivative rejection for non-enablement would be in error if reasserted against these claims. Applicants respectfully request therefore that the rejection be withdrawn.

Claims 1, 3–12, 32, 33, and 39 are rejected under 35 USC § 112, first paragraph, for lack of enablement and lack of written description, due to the percent identity language associated with SEQ ID NO: 1115 and SEQ ID NO: 1116. Applicants respectfully traverse these rejections.

Nonetheless, to speed prosecution, Applicants have amended claim 1 and cancelled claims 48 and 49. Therefore, the percent identity language is no longer in the claims, obviating the rejection. Applicants respectfully request that the above rejections be reconsidered and withdrawn.

Early and favorable action is earnestly solicited.

Respectfully submitted,

AMERSHAM BIOSCIENCES CORP

By: _____
Yonggang Ji
Registration No.: 53,073
Agent for Applicants

Amersham Biosciences Corp
800 Centennial Avenue
P. O. Box 1327
Piscataway, New Jersey 08855-1327

Tel: (732) 980-2875
Fax: (732) 457-8463

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on August 31, 2004.

Signature: _____

Name: Melissa Leck